

(12) UK Patent Application (19) GB (11) 2 333 209 (13) A

(43) Date of A Publication 14.07.1999

(21) Application No 9828030.8

(22) Date of Filing 18.12.1998

(30) Priority Data

(31) 10002685

(32) 08.01.1998

(33) JP

(71) Applicant(s)

Matsushita Electric Industrial Co., Ltd
(Incorporated in Japan)
1006, Oaza Kadoma, Kadoma-shi, Osaka 571, Japan

(72) Inventor(s)

Koutarou Hirai
Masayuki Yanagida
Ai Takasu

(74) Agent and/or Address for Service

Gill Jennings & Every
Broadgate House, 7 Eldon Street, LONDON,
EC2M 7LH, United Kingdom

(51) INT CL⁶

H04M 1/00, H04Q 7/32

(52) UK CL (Edition Q)

H4L LERA
H4K KBHC

(56) Documents Cited

GB 2314185 A GB 2308038 A GB 2296635 A
GB 2242048 A WO 96/27974 A1 WO 91/07041 A1

(58) Field of Search

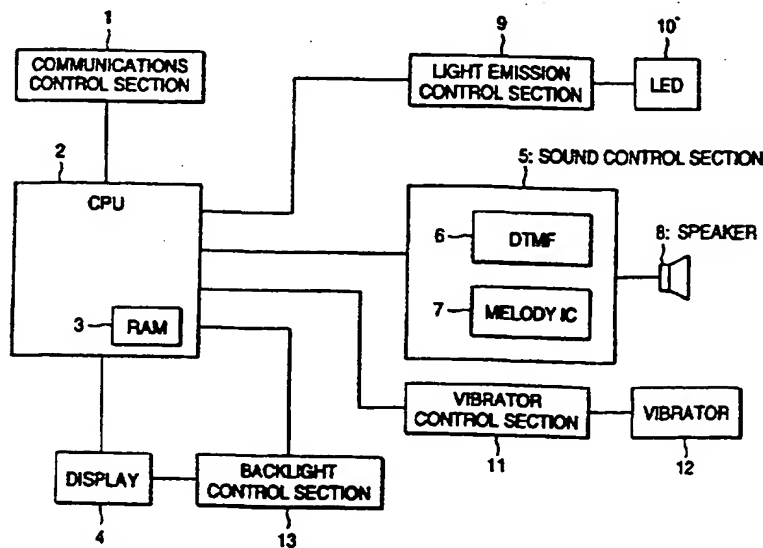
UK CL (Edition Q) G4H HRCU, H4K KBHC, H4L LECX
LERA
INT CL⁶ G08B 3/10 5/22 6/00, H04M 1/00 1/72 19/04,
H04Q 7/32
On-Line - WPI

(54) Abstract Title

Caller-influenced call notification at called mobile terminal

(57) A portable terminal device of a calling party individually sets a sounding pattern to be used for reporting an incoming call, and a called party is informed of the thus-set sounding pattern. As a result, when the terminal device of the called party makes the thus-set sounding pattern, the terminal device enables the user to immediately identify the calling party. In addition to sound 8, blinks of light 10, vibration of a vibrator 12, or the colour of the backlight 13 can be used solely or in combination to identify the calling party. Further, so long as the portable terminal device is provided with display means 4 capable of displaying characters, in addition to the incoming call reporting means, a simple message can be indicated on the portable terminal device. Consequently, the called party can immediately ascertain the nature of the call without directly talking with the calling party through the portable terminal device.

FIG. 1



GB 2 333 209

FIG. 2

NUMBER OF SOUND PATTERN	SOUND PATTERN/MELODY
01	BEEP 1
02	BEEP 2
03	BEEP 3
04	BEEP 4
05	MELODY 1
06	MELODY 2
07	MELODY 3
08	MELODY 4
09	MELODY 5
10	MELODY 6
11	MELODY 7
12	MELODY 8
13	MELODY 9
14	MELODY 10
15	MELODY 11
16	MELODY 12
17	MELODY 13
18	ORIGINAL MELODY

FIG. 5

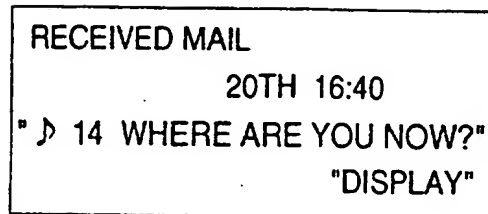
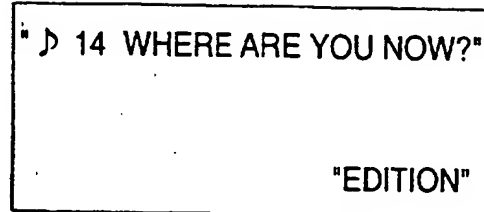


FIG. 6



(MELODY "LET IT BE" IS ISSUED FROM SPEAKER)

FIG. 7

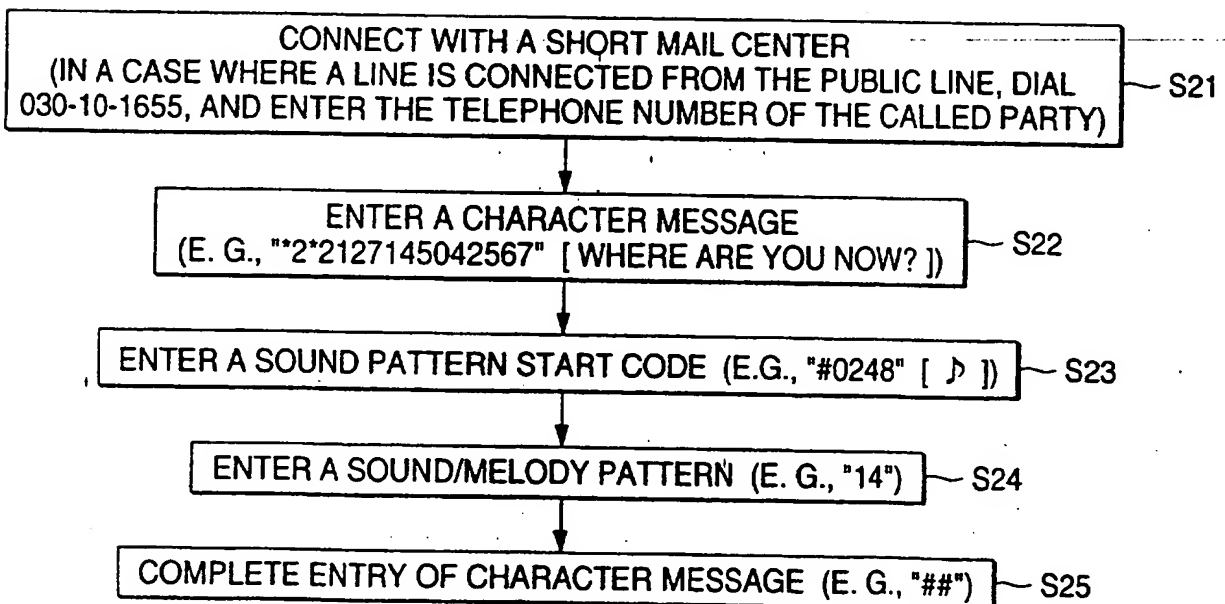


FIG. 8

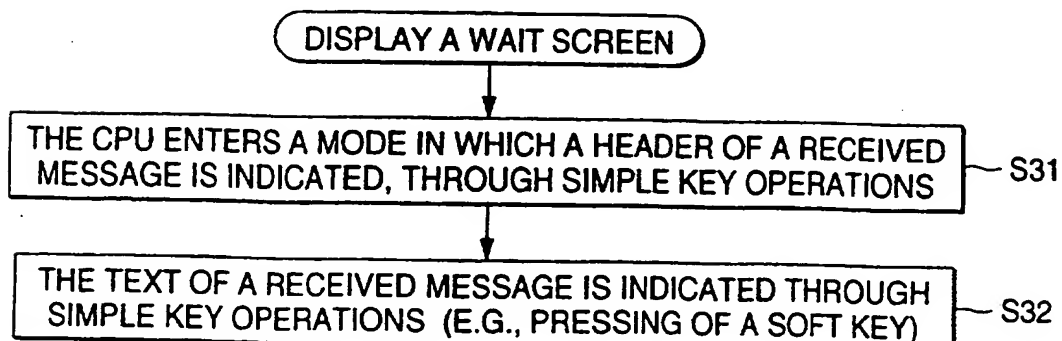


FIG. 12

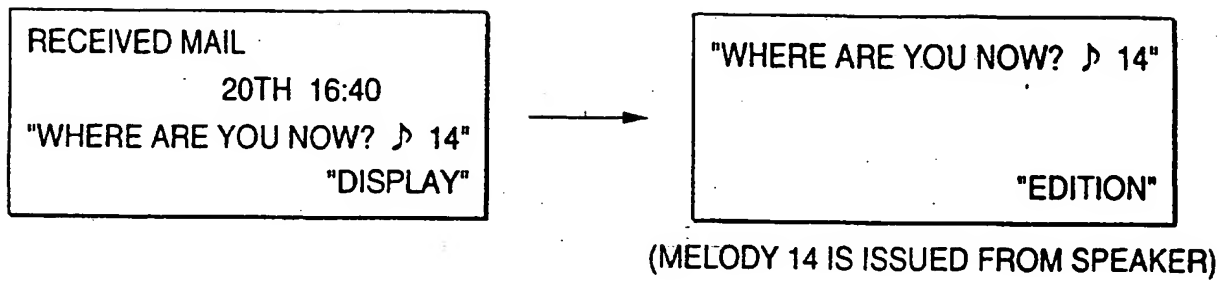
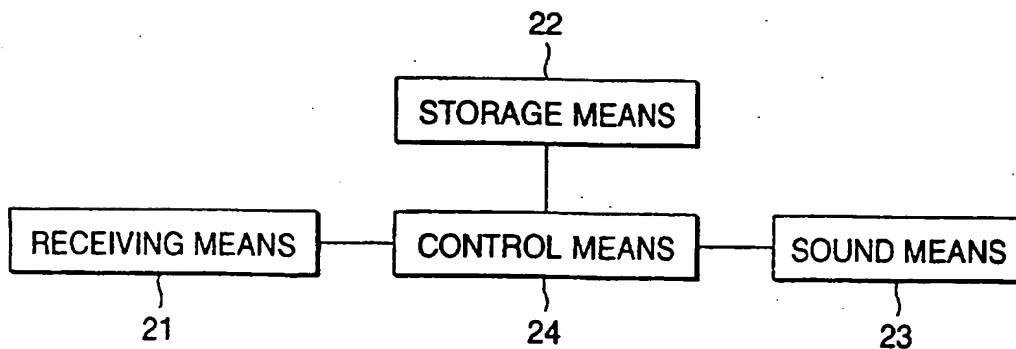


FIG. 13



means for controlling the sounding means 23 on the basis of the data sets selected from at least the two sound data sets stored in the storage means 22.

In the portable terminal device having such a configuration, the sounding means 23 is activated according to a sounding pattern set by the user. In the case of a portable terminal device capable of setting two sounding patterns, e.g., setting a beep as a first sound data set and setting a melody as a second sound data set, the user selects either the first sound data set or the second sound data set stored in the storage means 22, by way of the control means 24. When an incoming call is received from another portable terminal device, the receiving means 21 of the portable terminal device recognizes the arrival of the incoming call, and the control means activates the sounding means 23 on the basis of the sound data set selected by the user.

In the conventional portable terminal device, the sounding means can be activated solely according to the sounding pattern set by the user of the terminal device. Although the sounding pattern can be arbitrarily changed, the user cannot ascertain the identity of the calling party before he talks with the calling party by means of the terminal device.

The present invention has been conceived to solve the problem of the conventional portable terminal device,

directly talking with the calling party through the portable terminal device.

According to a first aspect of the present invention, there is provided a portable terminal device which controls, on the basis of data set by a portable terminal device of a calling party, one of a sound pattern for sounding means, a vibration pattern for vibration means, and the color of backlight of display means of a portable terminal device of a called party, wherein

10 a sound pattern set by the calling party is reported to the called party beforehand; and upon receipt of an incoming call, the called party can immediately identify the calling party.

According to a second aspect of the present invention, there is provided a portable terminal device which controls, on the basis of data set by a portable terminal device of a calling party, at least two of a sound pattern for sounding means, a vibration pattern for vibration means, and the color of backlight of display means of a portable terminal device of a called party in combination, wherein

20 a sound pattern set by the calling party is reported to the called party beforehand; and upon receipt of an incoming call, the called party can immediately identify the calling party.

According to a third aspect of the present invention, there is provided a portable terminal device comprising receiving means for receiving a signal waveform

transmitted from a calling party;

sounding means which has at least two sound patterns and is capable of reporting an incoming call;

light emission means which has at least two blink
5 patterns and is capable of reporting an incoming call;
and

control means which distinguishes, from the signal waveform received by the receiving means, sound data used for controlling the sounding means, and blink data used
10 for controlling the light emission means, and which controls the sounding pattern of the sounding means and the blink pattern of the light emission means on the basis of the sound data and the blink data that have been distinguished. As a result, many calling parties can be
15 identified by combination of the sound pattern and the blink pattern.

According to a sixth aspect of the present invention, the portable terminal device as defined in the fifth aspect is further characterized in that

20 the sound data have a common start code for starting sounding operations and a first pattern data set for specifying a sound pattern,

the blink data have the common start code for starting blinking operations and a second pattern data
25 set for specifying the blink pattern,

as a result of the portable terminal device of the called party receiving the signal waveform including the sound data, the sounding means is activated according

data set by the calling party. As a result, the sound data set and the blink data set can be readily distinguished from other data by specifying the positions of these data sets.

5 According to an eighth aspect of the present invention, there is provided a portable terminal device comprising:

receiving means for receiving a signal waveform transmitted from a calling party;

10 sounding means which has at least two sound patterns and is capable of reporting an incoming call;

vibration means which has at least two vibration patterns and is capable of reporting an incoming call; and

15 control means which distinguishes, from the signal waveform received by the receiving means, sound data used for controlling the sounding means and vibration data used for controlling the vibration means and which controls the sounding pattern of the sounding means and
20 the vibration pattern of the vibration means on the basis of the sound data and the vibration data that have been distinguished. As a result, many calling parties can be identified by combination of the sound pattern and the vibration pattern.

25 According to a ninth aspect of the present invention, the portable terminal device as defined in the eighth aspect is further characterized in that

the sound data have a common start code for starting

called party receiving the signal waveform including the sound data, the sounding means is activated according to a sound pattern corresponding to the sound data set by the calling party, and

5 as a result of the portable terminal device of the called party receiving the signal waveform including the vibration data, the vibration means is activated according to a vibration pattern corresponding to the vibration data set by the calling party. As a result,
10 the sound data set and the vibration data set can be readily distinguished from other data by specifying the positions of these data sets.

According to an eleventh aspect of the present invention, there is provided a portable terminal device
15 comprising:

receiving means for receiving a signal waveform transmitted from a calling party;

sounding means which has at least two sound patterns and is capable of reporting an incoming call;

20 display means which has at least two colors of backlight and is capable of reporting an incoming call; and

control means which distinguishes, from the signal waveform received by the receiving means, sound data used
25 for controlling the sounding means and illumination color data used for controlling the color of backlight of the display means and which controls the sounding pattern of the sounding means and the color of backlight of the

invention, the portable terminal device as defined in the eleventh aspect is further characterized in that

the sound data include a first start code for starting sounding operations and a pattern data set for specifying a sound pattern,

the illumination color data include a second start code for starting illumination operations and color data for specifying the color of backlight,

as a result of the portable terminal device of the called party receiving the signal waveform including the sound data, the sounding means is controlled according to a sound pattern corresponding to the sound data set by the calling party, and

as a result of the portable terminal device of the called party receiving the signal waveform including the illumination color data, the display means is controlled through use of a color of backlight corresponding to the illumination color data set by the calling party. As a result, the sound data set and the vibration data set can be readily distinguished from other data by specifying the positions of these data sets.

According to a fourteenth aspect of the present invention, there is provided a portable terminal device comprising:

receiving means for receiving a signal waveform transmitted from a calling party;

sounding means which has at least two sound patterns and is capable of reporting an incoming call;

sounding operations and a pattern data set for specifying a sound pattern,

the blink data have the common start code for starting blinking operations and a second pattern data set for specifying a blink pattern;

the vibration data having the common start code for starting vibrating operations and a third pattern data set for specifying a vibration pattern;

the illumination color data have the common start code for starting illumination operations and a color data set for specifying the color of backlight,

as a result of the portable terminal device of the called party receiving the signal waveform including the sound data, the sounding means is controlled according to a sound pattern corresponding to the sound data set by the calling party,

as a result of the portable terminal device of the called party receiving the signal waveform including the blink data, the light emission means is activated according to a blink pattern corresponding to the blink data set by the calling party,

as a result of the portable terminal device of the called party receiving the signal waveform including the vibration data, the vibration means is activated according to a vibration pattern corresponding to the vibration data set by the calling party, and

as a result of the portable terminal device of the called party receiving the signal waveform including the

blink data, the light emission means is controlled according to a blink pattern corresponding to the blink data set by the calling party,

as a result of the portable terminal device of the
5 called party receiving the signal waveform including the vibration data, the vibration means is controlled according to a vibration pattern corresponding to the vibration data set by the calling party,

as a result of the portable terminal device of the
10 called party receiving the signal waveform including the illumination color data, the display means is controlled through use of a color of backlight corresponding to the illumination color data set by the calling party. As a result, the sound data set, the blink data, the vibration
15 data, and the illumination color data can be readily distinguished from other data by specifying the positions of these data sets.

According to a seventeenth aspect of the present invention, the portable terminal device as defined in
20 any of the fourth, sixth, seventh, ninth, tenth, twelfth, thirteenth, fifteenth, and sixteenth aspects is further characterized in that one or a combination of two or more of the sound data, the blink data, the vibration data, and the illumination color data is/are inserted into a
25 specific position of transmission data or placed subsequent to a specific character, without including a start code. As a result, the sound data set, the blink data, the vibration data, and the illumination color data

the eighteenth aspect is further characterized in that the character message data include character data and a start code or specifying a character display appearing after one or a combination of two or more of sound data, blink data, vibration data, and illumination color data. As a result, the character message data can be readily distinguished from other data by specifying the position of the character message data.

According to a twenty-first aspect of the present invention, the portable terminal device as defined in the eighteenth aspect is further characterized in that the character message data include character data and a start code for specifying a character display appearing before one or a combination of two or more of sound data, blink data, vibration data, and illumination color data. As a result, the character message data can be readily distinguished from other data by specifying the position of the character message data.

According to a twenty-second aspect of the present invention, the portable terminal device as defined in the eighteenth aspect is further characterized in that one or a combination of two or more of sound data, blink data, vibration data, and illumination color data is/are interposed into a specific position of the character message data or placed after a specific character, without including a start code.

According to a twenty-third aspect of the present invention, the portable terminal device as defined in

setting performed by a calling party according to the first embodiment;

FIG. 4 is a flowchart showing one example of sounding operations performed by a called party according to the first embodiment;

FIG. 5 is a schematic representation showing an example of a message appearing on a display as a result of the sounding operations being performed by the called party according to the first embodiment;

FIG. 6 is a schematic representation showing an example of a message appearing on a display as a result of the sounding operations being performed by the called party according to the first embodiment;

FIG. 7 is a flowchart showing one example of sound setting performed by a calling party according to a second embodiment;

FIG. 8 is a flowchart showing one example of sounding operations performed by a called party according to the second embodiment;

FIG. 9 is a schematic representation showing an example of a message appearing on a display as a result of the sounding operations being performed by the called party according to the second embodiment;

FIG. 10 is a schematic representation showing an example of a message appearing on a display as a result of the sounding operations being performed by the called party according to the second embodiment;

FIG. 11 is a flowchart showing one example of

source of a single tone; 7 designates a melody IC serving as the source of a melody; and 8 designates a speaker for issuing the sound to the outside. Further, reference numeral 9 designates a light emission control section
5- for controlling blink-related operations; 10 designates an LED for indicating blinks of light to the outside; 11 designates a vibration control section for controlling vibration-related operations; 12 designates a vibrator for imparting vibration to the outside; and 13 designates
10 a backlight control section for controlling the backlight of the display 4.

With regard to an incoming call receiving action of the portable terminal device having the foregoing configuration, an explanation will be given of operations
15 of the portable terminal device required for reporting an incoming by means of sound. On the basis of a table shown in FIG. 2, a calling party sets a sound pattern to be transmitted by his portable terminal device. In this table, sound pattern numbers "01," "02," "03," "04"
20 are assigned single tones; i.e., the musical notes "C," the "D," the "E," and the "F," respectively. Sound pattern numbers "05" and "06" are assigned common melodies, and sound pattern numbers "07" to "18" are assigned popular melodies.

25 The sound pattern is set according to procedures shown in FIG. 3. Provided that a communications service provider of the portable terminal device of a called party is NTT (Nippon Telegraph and Telephone Corporation)

on the display 4 (step S11). Further, from the code
"#0248" included in the received data set the CPU 2
recognizes that the sound data set by the calling party
are included in the received data set, thus instructing
5 the sound control section 5 to select number "14" which
represents a sound pattern corresponding to the sound
data set. The sound control section 5 stores in its
memory a table analogous to that shown in FIG. 2. While
the header of the character message is being displayed,
10 the called party presses a menu key in order to indicate
the text of the character message (step S12). As shown
in FIG. 6, the text of the character message is displayed,
and through use of the melody IC 7 the sound control
section 5 selects a melody corresponding to the number
15 "14." The thus-selected melody; i.e., "Let it be," is
output from the speaker 8. Although the melody is output
for a predetermined period of time, the user can interrupt
the melody by pressing any key.

Although in the first embodiment the timing at which
20 sound is made according to the sound pattern is set,
through a simple key operation, to the timing at which
the character message is indicated on the display 4, sound
may be made immediately when the portable terminal device
receives an incoming call, without involving any key
25 operations.

(Second Embodiment)

A second embodiment of the present invention will
now be described. Although the second embodiment

processed by the CPU 2. The thus-processed signal is stored in the RAM 3. According to the procedures shown in FIG. 8, the called party causes the display 4 to indicate that the message is received. For example, as shown in FIG. 9, when the called party enters a menu key and a menu number, the CPU 2 enters a mode in which a header of the received character message is indicated on the display 4 (step S31). Further, from the code "#0248" included in the received data set, the CPU 2 recognizes that the sound data set designated by the calling party are included in the received data set, thus instructing the sound control section 5 to select number "14" which represents a sound pattern corresponding to the sound data set. While the header of the character message is being displayed, the called party presses the menu key in order to indicate the text of the character message (step S32). As shown in FIG. 10, the text of the character message is displayed, and through use of the melody IC 7 the sound control section 5 selects a melody corresponding to the number "14." The thus-selected melody; i.e., "Let it be," is output from the speaker 8. Although the melody is output for a predetermined period of time, the user can interrupt the melody by pressing any key.

Although in the second embodiment the timing at which sound is made according to the sound pattern is set, through a simple key operation, to the timing at which the character message is indicated on the display

dials symbol "##" representing the end code of the sound data set (step S44).

In the called party's portable terminal device that has received the transmission data set, the portable
5 terminal device performs the same operations as performed in the second embodiment. As shown in FIG. 12, the header of the received character message is indicated on the display 4. Subsequently, the text of the character message is indicated, and through use of the melody IC
10 the sound control section 5 selects a melody corresponding to the number "14." The thus-selected melody; i.e., "Let it be," is output from the speaker
8. Although the melody is output for a predetermined period of time, the user can interrupt the melody by
15 pressing any key.

Although in the third embodiment the timing at which sound is made according to the sound pattern is set to the timing at which the character message is indicated on the display 4 through a simple key operation, sound
20 may be made immediately when the portable terminal device receives an incoming call, without involving any key operations.

According to the third embodiment, the free message may be cancelled through use of "*4" representing
25 "[," "*6" representing "], " or other specific characters.

A repetitive message can be transmitted through use of "*05" or "*044" in place of "*2*2" representing the start of the free message. Since a two-digit code

this way, sound, blink patterns, vibration patterns, and the color of backlight can be set in several ways. As a result, as compared with a single incoming call reporting method, the present invention enables
5 specification of a larger number of calling parties.

In a case where an incoming call is reported by blinking the LED 10, the light emission control section 9 is provided with a table. In the table, two or more blink patterns for the purpose of blinking the LED 10
10 are each assigned a number. In the calling party's portable terminal device, after entry of a specific code for starting the processing of the blink pattern, the number of the blink pattern is input. As a result, the called party's portable terminal device causes the LED
15 10 to blink according to the blink pattern. The blink pattern may be provided with variations by changing of a time interval between blinks or the intensity of a blink. For example, there is provided a set of three blinks, and the blinks may be changed in such a way that the first
20 blink assumes high intensity and the second and third blinks assume low intensity.

Similarly, the vibrator control section 11 is provided with a table. In the table, two or more vibration patterns for the purpose of causing the
25 vibrator 12 to vibrate are each assigned a number. In the calling party's portable terminal device, after entry of a specific code for starting the processing of the vibration pattern, the number of the vibration pattern

reporting an incoming call. However, if sound will cause inconvenience to another person, another combination of these elements may be effective. To realize the other combination, in the portable terminal device of the calling party, entry of a specific common code for starting the combination will be followed by entry of the number of each of the patterns. Alternatively, a pair comprising a unique specific code and the number of a pattern may be input separately.

In the case of a portable terminal device not having a display for indicating a character message, only sound from a speaker, blinks of the LED, and vibration of the vibrator are available.

As mentioned above, in a portable terminal device according to the present invention, a portable terminal device of a calling party sets a sound pattern used for reporting an incoming call, and a called party is informed of the thus-set sound pattern beforehand. When sound is issued according to this sound pattern, the called party can immediately identify the calling party. Further, an incoming call may be reported by utilization of blinks of light, the vibration of a vibrator, and backlight of a display, in addition to sound. So long as a plurality of patterns for these elements are prepared and the calling party sets the patterns, the called party can immediately identify the calling party, in the same manner as mentioned previously. By combination of two or more of sound, blink patterns, vibration patterns,

CLAIMS

1. A portable terminal device comprising:

sounding means,

vibration means, and

5 display means, which controls,

on the basis of data set by a portable terminal device
of a calling party,

one of a sound pattern for sounding means, a
vibration pattern for vibration means, and the color of
10 backlight of display means of a portable terminal device
of a called party.

2. A portable terminal device comprising:

sounding means,

15 vibration means, and

display means, which controls,

on the basis of data set by a portable terminal device
of a calling party,

at least two of a sound pattern for sounding means,
20 a vibration pattern for vibration means, and the color
of backlight of display means of a portable terminal
device of a called party in combination.

5. A portable terminal device comprising:

receiving means for receiving a signal waveform transmitted from a calling party;

sounding means which has at least two sound
5 patterns and is capable of reporting an incoming call;

light emission means which has at least two blink patterns and is capable of reporting an incoming call;
and

control means which distinguishes, from the
10 signal waveform received by said receiving means, sound data used for controlling said sounding means, and blink data used for controlling said light emission means, and which controls the sounding pattern of said sounding means and the blink pattern of said light emission means
15 on the basis of the sound data and the blink data that have been distinguished.

6. The portable terminal device of Claim 5, wherein
the sound data have a common start code for
20 starting sounding operations and a first pattern data set for specifying a sound pattern;

the blink data have the common start code for starting blinking operations and a second pattern data set for specifying the blink pattern;

25 as a result of said portable terminal device of the called party receiving the signal waveform including the sound data, said sounding means is activated according to a sound pattern corresponding to the sound

8. A portable terminal device comprising:

receiving means for receiving a signal waveform transmitted from a calling party;

sounding means which has at least two sound
5 patterns and is capable of reporting an incoming call;

vibration means which has at least two vibration patterns and is capable of reporting an incoming call;
and

control means which distinguishes, from the
10 signal waveform received by said receiving means, sound data used for controlling said sounding means and vibration data used for controlling said vibration means and which controls the sounding pattern of said sounding means and the vibration pattern of said vibration means
15 on the basis of the sound data and the vibration data that have been distinguished.

9. The portable terminal device of Claim 8, wherein
the sound data has a common start code for starting
20 sounding operations and a first pattern data set for specifying a sound pattern;

the vibration data has the common start code for starting vibrating operations and a second pattern data set for specifying the vibration pattern;

25 as a result of said portable terminal device of the called party receiving the signal waveform including the sound data, said sounding means is activated according to a sound pattern corresponding to the sound

11. A portable terminal device comprising:

receiving means for receiving a signal waveform transmitted from a calling party;

sounding means which has at least two sound
5 patterns and is capable of reporting an incoming call;

display means which has at least two colors of backlight and is capable of reporting an incoming call;
and

control means which distinguishes, from the
10 signal waveform received by said receiving means, sound data used for controlling said sounding means and illumination color data used for controlling the color of backlight of said display means and which controls the sounding pattern of said sounding means and the color
15 of backlight of said display means on the basis of the sound data and the illumination color data that have been distinguished.

12. The portable terminal device of Claim 11, wherein

20 the sound data have a common start code for starting sounding operations and a pattern data set for specifying a sound pattern;

the illumination color data have the common start code for starting illumination operations and a color
25 data set for specifying the color of backlight;

as a result of said portable terminal device of the called party receiving the signal waveform including the sound data, said sounding means is controlled

14. A portable terminal device comprising:

receiving means for receiving a signal waveform transmitted from a calling party;

sounding means which has at least two sound
5 patterns and is capable of reporting an incoming call;

light emission means which has at least two blink patterns and is capable of reporting an incoming call;

vibration means which has at least two vibration patterns and is capable of reporting an incoming call;

10 display means which has at least two colors of backlight and is capable of reporting an incoming call; and

control means which distinguishes, from the signal waveform received by said receiving means, sound
15 data used for controlling said sounding means, blink data used for controlling said light emission means, vibration data used for controlling said vibration means, and illumination color data used for controlling the color of backlight of said display means, and which controls
20 the sound pattern of said sound means on the basis of the thus-distinguished sound data, the blink pattern of said light emission means on the basis of the thus-distinguished blink data, the vibration pattern of said vibration means on the basis of the thus-distinguished vibration data, and the color of backlight of said display
25 means on the basis of the illumination color data.

as a result of said portable terminal device of the called party receiving the signal waveform including the illumination color data, said display means is controlled through use of a color corresponding to the color data set by the calling party.

16. The portable terminal device of Claim 14, wherein the sound data include a first start code for starting sounding operations and a pattern data set for specifying a sound pattern,

the blink data include a second start code for starting blinking operations and second pattern data for specifying a blink pattern;

the vibration data include a third start code for starting vibration operations and third pattern data for specifying a vibration pattern;

the illumination color data include a fourth start code for starting illumination operations and color data for specifying the color of backlight,

as a result of said portable terminal device of the called party receiving the signal waveform including the sound data, said sounding means is controlled according to a sound pattern corresponding to the sound data set by the calling party,

as a result of said portable terminal device of the called party receiving the signal waveform including the blink data, said light emission means is controlled according to a blink pattern corresponding to the blink

19. The portable terminal device of Claim 7, wherein one or a combination of two or more of the sound data, the blink data, the vibration data, and the illumination color data is/are inserted into a specific position of transmission data or placed subsequent to a specific character, without including a start code.
20. The portable terminal device of Claim 9, wherein one or a combination of two or more of the sound data, the blink data, the vibration data, and the illumination color data is/are inserted into a specific position of transmission data or placed subsequent to a specific character, without including a start code.
21. The portable terminal device of Claim 10, wherein one or a combination of two or more of the sound data, the blink data, the vibration data, and the illumination color data is/are inserted into a specific position of transmission data or placed subsequent to a specific character, without including a start code.
22. The portable terminal device of Claim 12, wherein one or a combination of two or more of the sound data, the blink data, the vibration data, and the illumination color data is/are inserted into a specific position of transmission data or placed subsequent to a specific character, without including a start code.

said control means controls one or a combination of two or more of the sound pattern of said sound means, the blink pattern of said blink means, the vibration pattern of said vibration means, and the color of backlight of said display means.

27. The portable terminal device of Claim 2, further comprising:

display means capable of displaying characters and drawings; and

control means capable— of distinguishing character message data to be indicated on said display means, wherein

said control means controls one or a combination of two or more of the sound pattern of said sound means, the blink pattern of said blink means, the vibration pattern of said vibration means, and the color of backlight of said display means.

28. The portable terminal device of Claim 3, further comprising:

display means capable of displaying characters and drawings; and

control means capable of distinguishing character message data to be indicated on said display means, wherein

said control means controls one or a combination of two or more of the sound pattern of said sound means,

backlight of said display means.

31. The portable terminal device of Claim 11, further comprising:

5 display means capable of displaying characters and drawings; and

control means capable of distinguishing character message data to be indicated on said display means, wherein

10 said control means controls one or a combination of two or more of the sound pattern of said sound means, the blink pattern of said blink means, the vibration pattern of said vibration means, and the color of backlight of said display means.

15

32. The portable terminal device of Claim 14, further comprising:

display means capable of displaying characters and drawings; and

20 control means capable of distinguishing character message data to be indicated on said display means, wherein

said control means controls one or a combination of two or more of the sound pattern of said sound means,
25 the blink pattern of said blink means, the vibration pattern of said vibration means, and the color of backlight of said display means.

37. The portable terminal device of any one of Claims 26 to 32, wherein

when the character message data are received, one or a combination of two or more of the sound pattern of said sound means, the blink pattern of said light emission means, the vibration pattern of said vibration means, and the color of backlight of said display means is/are controlled.

10

38. The portable terminal device of any one of Claims 26 to 32, wherein

when the character message data are indicated on said display means, one or a combination of two or more of the sound pattern of said sound means, the blink pattern of said light emission means, the vibration pattern of said vibration means, and the color of backlight of said display means is/are controlled.

39. A particular terminal device substantially as described with reference to Figures 1 to 12 of the accompanying drawings.



The
Patent
Office



INVESTOR IN PEOPLE

54

Application No: GB 9828030.8
Claims searched: 1 to 39

Examiner: Jared Stokes
Date of search: 29 April 1999

Category	Identity of document and relevant passage	Relevant to claims
Y	WO 96/27974 A1 (Ericsson) See page 13 line 20-page 14 line 38	1,2,3,5,8, 11,14 at least
Y	WO 91/07041 A1 (Anderson) See abstract	1,2,3,5,8 11,14 at least

X	Document indicating lack of novelty or inventive step	A	Document indicating technological background and/or state of the art.
Y	Document indicating lack of inventive step if combined with one or more other documents of same category.	P	Document published on or after the declared priority date but before the filing date of this invention.
&	Member of the same patent family	E	Patent document published on or after, but with priority date earlier than, the filing date of this application.